

July 27, 1926.

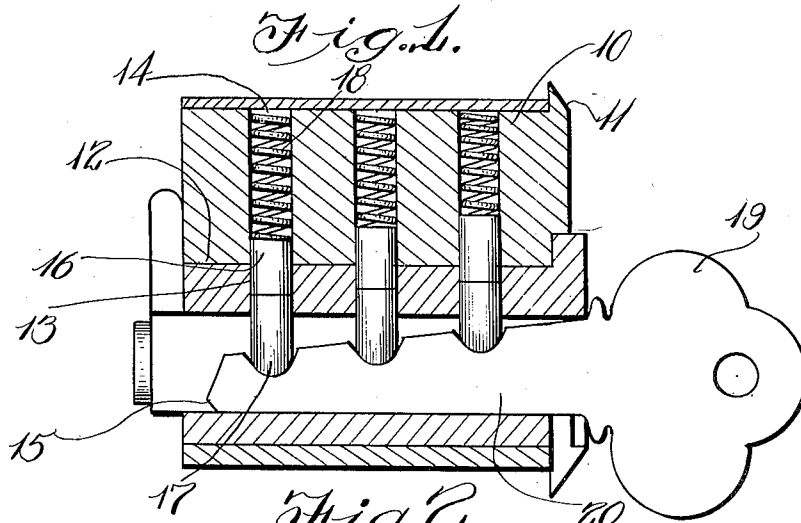
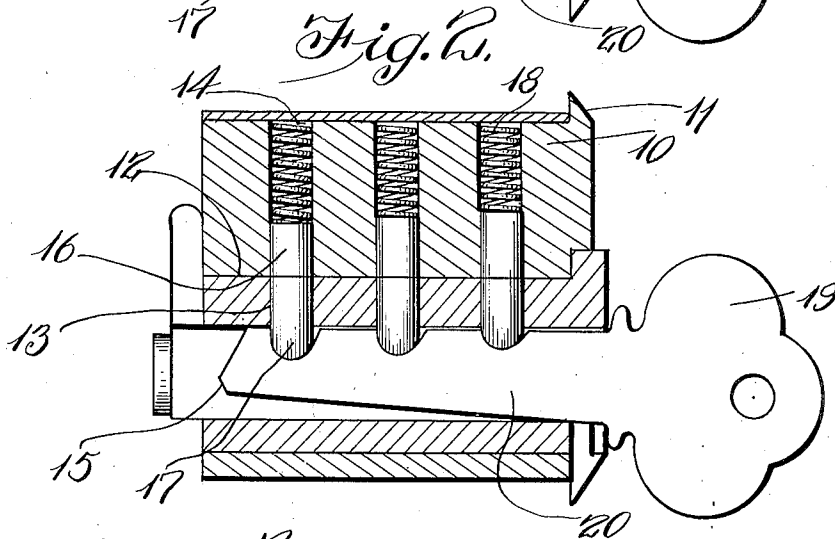
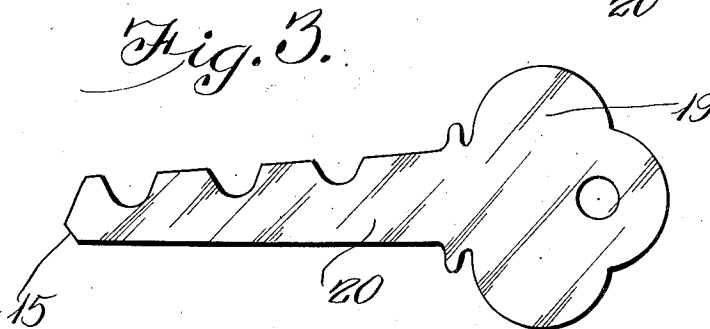
1,593,683

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KEY FOR PIN LOCKS

Filed June 29, 1925

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

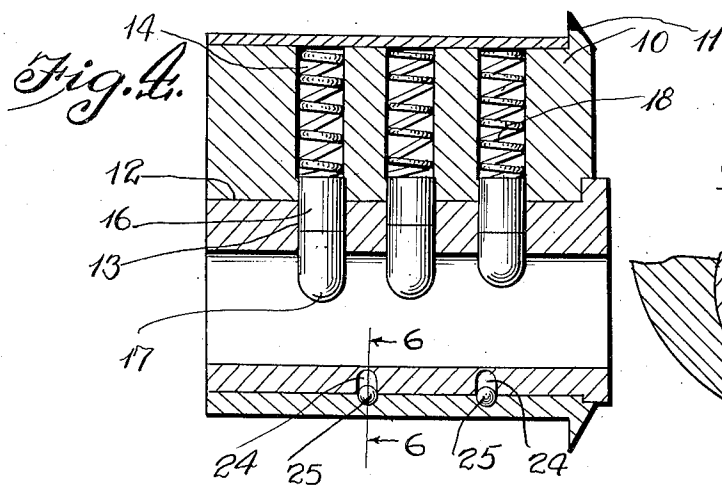
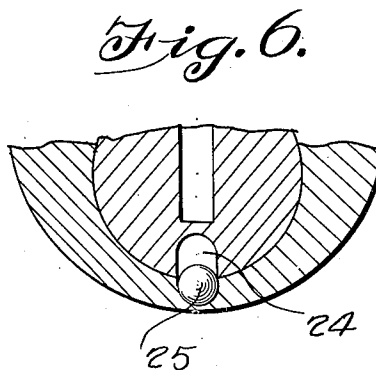
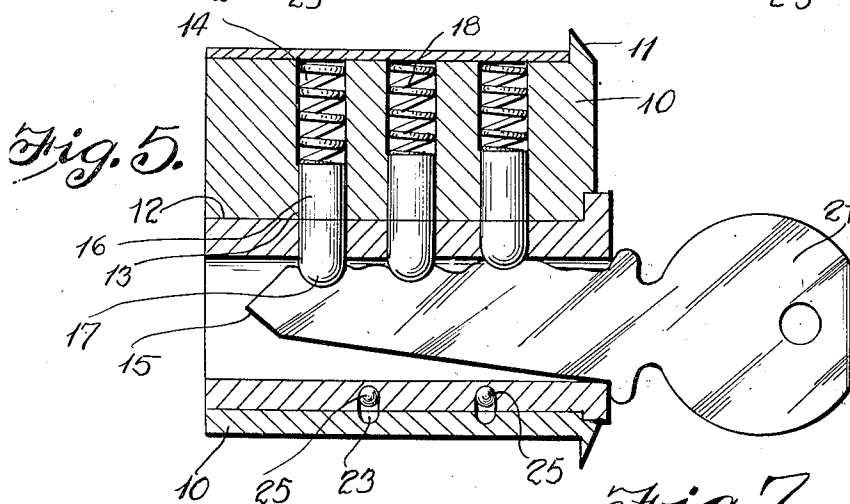


Fig. 7.

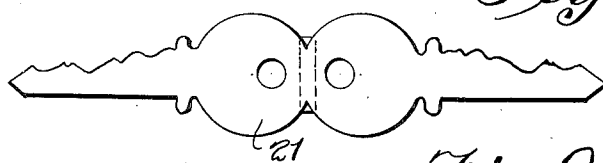


Fig. 8.

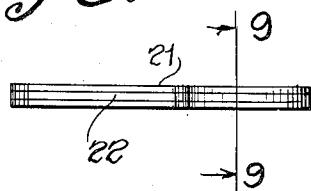


Fig. 9.



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KEY FOR PIN LOCKS.

Application filed June 29, 1925. Serial No. 40,408.

This invention relates to locks and has special reference to a pin lock and key therefor. In the ordinary lock of the pin type, commonly known as a Yale lock, the key is slipped into a slot in the barrel of the lock and raises certain pins to such points that the barrel may be turned in the cylinder.

In the usual type of lock the key is so arranged that it is automatically positioned to elevate the pins to proper operative position. Consequently, a person accidentally obtaining the key or a duplicate thereof, may without trouble, operate the lock. The present invention contemplates the provision of a key of special construction which must be manipulated in a particular manner in order to effect operation of the lock.

One object of the invention, this being the principal object, is to provide a novel form of key for use in locks of the pin lock type.

A second important object of the invention is to provide a magnetic tilting key of the type shown in my copending application for magnetic key and lock operable by the same, which was filed February 6, 1925 and bears the Serial No. 7,275 the key being tiltable for unlocking.

With the above and other objects in view as will be hereinafter apparent, the invention consists in general of certain novel details of construction and combinations of parts hereinafter fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:—

Figure 1 is a vertical median section through a portion of such lock showing the position of the key as inserted therein.

Figure 2 is a similar view showing the key in its position after proper manipulation.

Figure 3 is a side elevation of such key.

Figure 4 is a vertical median section through a modification of the lock intended for use with a magnetic key.

Figure 5 is a view similar to Figure 4 by showing the key in position and tilted.

Figure 6 is an enlarged detail section on the line 6—6 of Figure 4.

Figure 7 is a detail view of the steel blank from which my magnetic key is made.

Figure 8 is an edge view of the blank folded.

Figure 9 is an enlarged detail section on the line 9—9 of Figure 8.

In the present illustration of the invention only those parts especially related thereto are disclosed and in the drawings it will be seen that the lock is of the ordinary type, being provided with a cylinder 10 having the usual escutcheon 11 and having an eccentrically positioned bore 12 wherein is fitted the barrel 13. In the cylinder 10 is a series of radial bores 14 and the barrel 13 is provided with a corresponding series of bores 15. Pins having outer parts 16 and inner parts 17 slide in these bores and are urged inwardly by springs 18. The outer and inner parts of these pins are so arranged that when all pins, and only when all pins, are properly urged outwardly by a key, the contact surfaces of said outer and inner parts will coincide with the surface of the bore 12 so that the barrel 13 may then be rotated. As is common in such locks, if one or more pins are displaced from proper position by a wrong key the barrel cannot be rotated. Ordinarily, whenever the proper key is inserted these pins are raised to the correct position to permit rotation of the barrel and consequently actuation of the lock.

In the present instance, there is provided a key having a handle 19 and blades 20 which has its back beveled off so that it tapers from the handle forwardly. Thus the key may be inserted in the lock, as shown in Figure 1, and yet the pins be not properly positioned for rotation of the barrel and actuation of the lock.

Now, this key may be used with either a plain pin lock such as is shown in Figures 1 and 2 or the key may be made of a thin steel blank 21, see Figure 7, doubled and having its sides kept separated by a non-magnetic strip 22, the steel blank being magnetized and thus forming a species of horseshoe magnet. When so used the cylinder 10 is provided on its bottom portion with one or more semi-spherical recesses 23 and the barrel is provided with corresponding recesses 24, but deeper than the recesses 23. Steel or iron balls 25 rest in these recesses and as will be seen by an inspection of Figures 4 and 6, so long as the key is not present in the key slot these balls will

rest in such position as to prevent rotation of the barrel in the cylinder. However, when the key is inserted it, being magnetic, will draw the balls upward in the position shown in Figure 5 thus effecting a primary release of the barrel in the cylinder. Then when the key is tilted, as in Figure 5, a secondary release takes place and the barrel may be turned.

10 It will be noted that the spring next the point of the key is made somewhat heavier and stiffer than the other springs, so that this spring effectually holds the point of the key down in the slot until it is properly raised by the depression of the hand.

15 In operation the key is inserted as in the ordinary manner and the handle then depressed, this changes the position of the pins from that shown in Figure 1 to that shown in Figure 2 and accordingly permits the lock to be operated by rotation of the barrel.

20 There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

25 Having thus described the invention, what is claimed as new, is:—

1. A lock and key therefor, including a cylinder, a barrel eccentrically mounted in

said cylinder, said barrel having a slot therein, sectional pins normally holding the barrel from rotation in said cylinder and a key having a handle and a blade projecting therefrom to raise the sectional pins into locking operative position having the back of the blade beveled to taper with relation to said slot, the slot being of such vertical dimensions as to permit free tilting of the key therein.

2. A lock and key therefor, including a cylinder, a barrel eccentrically mounted in said cylinder, said barrel having a slot therein, sectional pins normally holding the barrel from rotation in said cylinder, springs urging said pins inwardly of the barrel, the spring at the inner end being of greater strength than the remainder of said springs, and a key having a handle and a blade projecting therefrom to raise the sectional pins into locking operative position having the back of the blade beveled to taper with relation to said slot, the slot being of such vertical dimensions as to permit free tilting of the key therein.

In testimony whereof I affix my signature.

ARTHUR E. ANAKIN.